

### ABSTRACT

A signal processing apparatus for detecting and displaying the properties of diesel fuel powered compression-ignition engines senses strain pulses in the fuel injection rail structure to perform a variety of testing functions. Among other capabilities, the apparatus permits the user to establish stroboscope timing, to measure engine RPM, to view the relationship between crankshaft position and injection time, and to examine the time-dependent properties of strain pulses on individual fuel injectors in order to evaluate the condition of the diesel engine.